



A.D. 1861, 29th OCTOBER. N° 2709.

S P E C I F I C A T I O N

OF

WILLIAM SAVILE.

SURGICAL STOCKINGS, SOCKS, KNEE
CAPS, &c.

L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

Price 3d.

1862.



A.D. 1861, 29th OCTOBER. N° 2709.

Surgical Stockings, Socks, Knee Caps, &c.

(This Invention received Provisional Protection only.)

PROVISIONAL SPECIFICATION left by William Savile at the Office of the Commissioners of Patents, with his Petition, on the 29th October 1861.

I, WILLIAM SAVILE, of the Firm of Messieurs Haywood and Savile, of
5 Hounds Gate, in the Town and County of the Town of Nottingham, Manufacturers of Elastic Surgical Stockings, do hereby declare the nature of the said Invention for “**IMPROVEMENTS IN MACHINERY OR APPARATUS FOR THE MANUFACTURE OF ELASTIC SURGICAL STOCKINGS, SOCKS, KNEE CAPS, BELTS, BANDS, OR OTHER ARTICLES,**” to be as follows :—

10 My improvements consist in manufacturing the articles above mentioned on the ribbing frame, with the parts herein-after mentioned added thereunto, which I effect in the following manner :—The elastic thread of india-rubber, which is covered previous to my working it up with silk, cotton, or other fibre, is laid in between the frame needles and the machine needles by means of an
15 additional set of carriers, the throw of such additional set of carriers being regulated at each end of the machine according to the length of rubber intended to be laid on the needles. These rubber carriers are placed in front of the frame, and above the needles, and in addition to the carriers which lay the threads of which the fabric is made, the rubber carriers are dipped below
20 the needles at each selvage until the course is finished, and they are required to lay again the rubber on the needles. Below the needles, in front, are two other sets of carriers, in addition to those mentioned above, the carriers of one

Savile's Improvements in Surgical Stockings, Socks, Knee Caps, &c.

such set which stand in front lay on the needles a fining thread to be worked with each alternate course in the leg of a stocking, if a stocking is being made; and the carriers of the other set, which lie between the last named set and the needles, lay on the needles a fining thread for the heel, the carriers of both these last-mentioned sets being regulated as required at each selvage. 5

The welt is made first, and is made plain; the leg is then commenced, and is made wider until the greatest width required is attained. In proceeding to make the calf of the leg the fabric is narrowed, and both sides of the heel are made at once. When this has been done the heel is turned off, but is afterwards set on again to work the instep, which is made as wide as the narrow 10 part of the leg. The welt of a stocking, the edge of the heel, and the end of the instep are made plain, the remainder portion of the stocking is made of tucked work, a tucked stitch being made at every other course, the rib being what is called a two and one or other rib, as may be required. The following is the method I employ to regulate the throw of the several sets of carriers 15 when using the above arrangement to a stocking frame when worked by hand. The three additional sets of carriers are each secured to a carrier bar somewhat shorter than the length of the frame, which carrier bar slides on a rod or bar, and is supported at each end of the frame, in wide frames it is also supported at the centre and at each end of the rod or bar, but lying within 20 the bearings are a number of pieces of iron of the required thickness; when these hang down, the carrier bar can be moved from end to end of the rod or bar, but when the fabric is required to be narrowed, one or more of the pieces of iron are turned upward until they lie between a stop at each end of the frame and the ends of the carrier bar, thus the carrier bar has a shorter 25 distance to slide to and fro upon each time a bit is turned up at each end, and when it is desirable to widen the fabric one or more of the bits are let down to enable the carrier bar to slide a greater length, the carriers laying the threads upon a less or greater number of needles, according to the greater or less number of pieces of iron which lie between the stops and the ends of the 30 carrier bars.

But in hosiery frames known as rotary frames, and constructed to be driven by steam or other power I use the following arrangement of parts:—On the standards of the machine are cast bearings, or bearings are secured to the standards; these bearings carry a spindle bar, which is free to turn in the 35 bearings, as required. To this bar are attached arms, the upper ends of which form bearings for a bar or bars, on which slides one or more carrier bolt bars; to the bars on which the carrier bolt slides are secured brackets, in which slide two light bars, having stops on their upper side at either end of the

Savile's Improvements in Surgical Stockings, Socks, Knee Caps, &c.

machine. The ends of the carrier bolts come against the stops ; the relative distance the stops are placed apart regulate the throw of the carriers. The light bars above named have a short portion of their length at each end on the sides lying nearest each other formed into a rack ; thus there is a pair of racks
5 opposite each other at each end of the frame, and between each pair of racks is placed a cog wheel gearing into them, the cog wheel being moved round a certain distance by another but larger wheel, which gears into a portion of the smaller one, and which stands above the light bars. The larger wheels are moved round tooth by tooth by means of a clawker or driver at each end of
10 the machine, actuated by a cam or tappet plate or other equivalent means, one or other of the clawkers being thrown into gear as required, to widen or
✓ narrow ; or instead of using a pair of racks and wheels at each end of the frame, one pair of wheels and one pair of clawkers may be used, one clawker being thrown out of gear when the other is at work, by which means the
15 light bars carrying the stops will be moved to the right or left alternately, or vice versâ.

The whole of the above apparatus may be placed at any required distance to or from the front of the frame.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1862.

